

REMARKS

The Office Action of December 10, 2009, has been carefully reviewed, and in view of the following remarks, reconsideration and allowance of the pending claims are respectfully requested.

In the above Office Action, claims 1, 3-4, 6-8, 11-15, 20-21 and 23 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,158,183 to *Biebuyck*, claims 2, 22, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Biebuyck* in view of U.S. Patent No. 6,469,250 to *Decore et al.*, claims 5, 9 and 16 were rejected over *Biebuyck* in view of U.S. Patent No. 6,084,180 to *DiBartolo, Jr. et al.*, claims 10, 17 and 19 were rejected over *Biebuyck* in view of U.S. Patent No. 5,792,992 to *Handler*, and claim 18 was rejected under 35 U.S.C. §103(a) as being unpatentable over *Biebuyck* in view of *Handler* and further in view of *Decore et al.*. For at least the following reasons, these rejections are respectfully traversed.

As set forth above, independent claim 1 is directed to a curtain wall structure having a U-shaped channel for receiving a glazed panel therewithin, the improvement comprising a structural portion alongside the U-shaped channel including at least one opening for receiving means for securing the curtain wall structure to a concrete slab, and a recess disposed inwardly of the U-shaped channel and the structural portion and integrated therewith, wherein said recess defines at least one wireway for power and/or data/telecommunication cables in the curtain wall structure.

Independent claim 13 is directed to a curtain wall structure comprising a channel section for receiving a glazed wall panel therewithin, an anchoring section

spaced inwardly of and immediately adjacent to the channel section, said anchoring section including at least one opening for receiving means for securing the curtain wall structure to a concrete slab; and an enclosed wireway for power and/or data/telecommunication cables separate and distinct from the anchoring section, disposed inwardly of the channel section and the anchoring section, and integrated therewith.

With respect to independent claim 1, the primary reference upon which the Examiner relies, *Biebuyck*, discloses a curtain wall having a U-shaped receiving area for panel 120d. The pressure plate cover 140 cited by the Examiner as allegedly corresponding to the claimed structural portion includes a screw 151 for securing the glazed panel member 120d to the sill member 102 -- but it does not secure the curtain wall structure to a concrete slab as now recited in claim 1. Accordingly, Applicant respectfully submits that claim 1 is not anticipated by *Biebuyck*.

With respect to independent claim 13, *Biebuyck* discloses a structure 134 having holes 168 so that bolts 46 can be inserted therethrough in order to secure the curtain wall to the concrete slab 122. The Examiner refers to this section as anchoring section 46. As clearly shown, anchoring section 46 is not immediately adjacent to the channel section defined between 154 and 156. Further, *Biebuyck*, does not disclose or suggest a further channel or wireway disposed inwardly of both the U-shaped receiving area and the anchoring section, separate and distinct from the anchoring section, and which is integrated therewith for receiving power and/or data/telecommunication cables. That is, the only enclosed raceway of any type in *Biebuyck* is the same enclosed section which houses the anchor 46. Thus, Applicant submits that claim 13 is not anticipated by *Biebuyck*.

One of the advantages of the claimed invention is that it provides a wireway or so-called channel for the cables which is separate and distinct from the channel housing the bolt or other securing means which attaches the curtain wall structure to the concrete slab. The channel housing the bolt must include holes in order for the bolt to pass therethrough, thus allowing dust and dirt to enter the housing, in addition to the risk of moisture entering through the holes. The provision of a separate wireway without such holes eliminates this issue and has not been previously been used in a curtain wall structure.

The claimed invention also solves a recognized but unresolved problem in the industry. Many curtain wall manufacturers recognize the advantage and recommend having a single source supplier in order to increase quality control. Kawneer, for example, has the following statement in their literature, a copy of which is submitted herewith:

2.07 Source Quality Control

A. **Source Quality:** Provide aluminum curtain walls specified herein from a single source.

1. **Building Enclosure System:** When aluminum curtain wall are part of a building enclosure system, including entrances, entrance hardware, windows, storefront framing and related products, provide building enclosure system products from a single source manufacturer.

However, even recognizing this advantage, none of the curtain wall manufacturers make any wiring systems to be used with their systems. Most likely, none of the curtain wall manufacturers want to take the time to custom engineer such a system since there is a good chance that another company will get the final bid to do the work. A number of brochures are submitted in the Information Disclosure Statement being filed concurrently herewith.

Still further, the use of the claimed integrated curtain wall structure has a number of unexpected results and advantages, including:

-- substantial cost savings, since copper wire is expensive, by not wiring to the core and back for every perimeter outlet. This was up to 8% of the total construction budget in a test case.

-- cost savings from not requiring out-of-sequence trades (steel framing, wiring rough-in, drywall) .

-- cost savings from not duplicating the chases.

-- cost savings from having a single manufacturer- especially in schedule savings.

-- convenience and availability of outlets for power and data on otherwise all-glass walls. The National Electric Code recognizes the difficulty of placing power outlets on glazed walls and thus does not require outlets on glazed walls in commercial structures. If the claimed invention was readily available, this requirement may change due to the ease by which such outlets could then be safely provided.

-- aesthetic advantages are significant and they are critical to architectural products. Having matching profiles and finishes and clean lines are unique features not gained by placing a chase up against existing curtain wall framing.

Finally, the biggest unexpected consequence of the claimed invention is that it creates a ready-made "Smart Grid" on the entire building exterior. The channels (already sitting there empty but heretofore not accessible) can now be used to embed sensors for collecting real-time occupancy and weather data. This data can be used to fine-tune HVAC, lighting and other systems. Similar "demand response"

systems have been shown to save as much as 50% of HVAC and lighting costs over the entire lifetime of the building. This feature is in great demand, but has never been cost-effectively implemented using conventional curtain wall structures.

The secondary references upon which the Examiner relies, *Decore et al.*, *DiBartolo Jr. et al.*, and *Handler*, are directed to conventional wire raceways or other types of cable management systems. Applicant respectfully submits that there is no suggestion and thus no motivation to combine any of these references with the curtain wall structure of *Biebuyck*. *Biebuyck* is directed to a curtain wall structure intended for use on the exterior walls of a building, as is the claimed invention. One skilled in the art would expect moisture or water to be present near or within the curtain wall structure and thus would not be motivated to place electrical, power and other moisture sensitive cables proximal to the curtain wall. Thus, Applicant respectfully submits that without the use of hindsight, a curtain wall structure with an integrated wireway and the modifications proposed by the Examiner would not have been obvious.

A detailed discussion of the additional distinguishing aspects of the curtain wall structure recited in the remaining dependent claims is not set forth at this time as the dependent claims are allowable by virtue of their dependence from allowable independent claims 1 and 13.

CONCLUSION

In view of the above remarks, Applicant respectfully submits that the claims of the present application are now in condition for allowance, and an early indication of the same is earnestly solicited.

Should any questions arise in connection with this application or should the Examiner believe that a telephone conference would be helpful in resolving any remaining issues pertaining to this application; the Examiner is kindly invited to call the undersigned counsel for Applicant regarding the same.

Respectfully submitted,

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